Comparison adding effects of dexamethasone and fentanyl different doses in a patient's pain control pump (PCA) after lower limb orthopedic surgery

Abstract

Background and Objective: It has been observed in studies that adding corticosteroids to PCA opioids increases the satisfaction of patients and reduces the pain score. It also reduces the dose of fentanyl and the side effects of opioids. In this study, the effect of dexamethasone with different doses on improving the quality of pain control and decreasing the amount of fentanyl consumed in PCA in patients undergoing lower limb orthopedic surgeries was investigated by spinal anesthesia.

Materials and methods: This clinical trial was performed on 102 patients aged 18-60 years old with a candidate for foot fracture surgery with grade 1 and 2 ASA after satisfaction. In the control group, 10 cc normal saline is slowly injected. To groups 2 and 3, Dexamethasone 8 mg is injected slowly in a 10-cc volume. Also, the PCA group 2, Dexamethasone 8 mg and PCA group 3, 16 mg dexamethasone plus infusion were added with fentanyl. After entering the patient, the patient's pain intensity was measured at 2, 6, 12, and 24 hours after the completion of the visual analogue pain assessment (VAS). In the event of a pain intensity of more than 4 in the VAS scale, pethidine was injected at a dose of 0.5 mg / kg body weight as an additional dose. Patient satisfaction, possible complications, as well as the amount of fentanyl consumed in the PCA pump and pethidine injected by completing the relevant forms within 24 hours, and with the schedule Statistical analysis of SPSS v16 data analysis.

Results: In this study, 102 patients with lower limb orthopedic surgery performed the majority of male patients and the mean age of patients in the first group was 52.42 years, the second group was 33.5 years and in the third group was 40.44 ± 14.19 years. In the study, it was observed that increased use of dexamethasone reduced the amount of analgesia 24 hours after surgery and the need to take pethidine 12 and 24 hours after surgery, but had no effect on vomiting, nausea and vomiting.

Conclusion: After reviewing the articles and the results of this study, it can be seen that non-pharmacological and educational methods have good results on patients' anxiety. Therefore, preoperative training was routinely performed in surgical departments to reduce the incidence of receiving sedative medications.

Keywords: Dexamethasone, Fentanyl, Patient Pain Control Pump (PCA), Orthopedic Surgery